



## Project Case Study - Madagascar

# CHU Befelatanana—an alternative for recycling disinfected plastic

### Background

The Centre Hospitalier Universitaire Joseph Raseta Befelatanana (CHUJRB), is one of the eight medical facilities supported by the GEF/HCWM project and have disinfected more than 1521 kg of infectious waste between January and November 2019. Previously, health care waste disposal was done by incineration—without any sorting or waste separation. People living near the hospital were complaining about the polluted air they were breathing.

Following the installation of the non-incineration treatment equipment—autoclave—in August 2018, the CHUJRB adopted best environmental practices in waste management, from collection in services to final disposal through to recycling. Among the project's health facility beneficiaries, the CHUJRB was the first health facility to recycle waste into useful and reusable objects.



### Approach

The team at the medical waste treatment centre considered the possibility of reusing disinfected waste—especially those to be thrown into the municipal landfill—in the flea market. Then, Soatiana Frédérique Coste, the Health Care Waste Management Manager at CHURJB, noticed the accumulation of plastics in the bins. Then with her lead and the endorsement of the institution, the team took the initiative to transform the disinfected waste into self-locking chairs and paving stones. "I first asked myself about the types of plastics that can be processed," explains Soatiana, "then tried once or twice with the materials at our disposal."

In a corner of the treatment centre the team has a fireplace, moulds, and a mortar to crush the glass vials into sand. Transformation is a team effort. The person in charge of the processing centre supervises, sorts the types of plastics, and checks the weighing. The autoclave technicians melt the syringes in the pot and mould them once they are melted.





## Outcomes

Though still in the testing phase, the paving stones are planned to be sold for 45,000 Ariary (12,44 USD) per square meter. Six kilos of syringes and serum vials, combined with five kilos of glass waste, produce 50 cm<sup>2</sup> of pavers in ninety minutes.

The team at the medical waste treatment centre is looking for opportunities to partner with associations or social enterprises to sell the product. The revenue obtained will be used for the upkeep of the establishment. The product's durability is tested by exposing the pavestone to high temperatures and its compressive strength is tested by applying the load of a vehicle. The medical waste treatment centre has taken the initiative to recycle plastics, but the sustainability of the activity depends on long term capacity building.

## Project Overview

**Project:** GEF-financed UNDP-supported regional project: "Reducing UPOPs and Mercury Releases from The Health Sector in Africa"

**Objective:** Implement best environmental practices and introduce non-incineration healthcare waste treatment technologies and mercury-free medical devices in four Sub-Saharan African countries to reduce harmful releases from the health sector

**Financing:** \$ 6,453,195 (GEF financing)  
\$ 28,936,164 (co-financing)

**Term:** December 2015 until December 2020

**Partner:** WHO - World Health Organization  
HCWH - Health Care Without Harm

**Countries:** Ghana, Madagascar, Tanzania, Zambia

**Executing Agency:** Ministry of Public Health, Madagascar  
Ministry of Environment, Madagascar

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